

**REMARKS**

Claims 1, 10, 34, 42, 49, 53, 63, 69-71, 73, 84, 90, 107, 116 and 134-139 were previously pending in this application with claims 1, 10, 34, 42, 49, 53, 73, 84, 90, 107 and 116 being withdrawn from consideration.

Claims 10, 42, 53, 73, 84, 90 and 116 are now cancelled without prejudice or disclaimer. Applicant reserves the right to pursue the subject matter of these claims in one or more continuing applications.

Claims 1, 34, 49 and 107 are now cancelled and reintroduced as new claims 144, 145, 146 and 147 respectively in order to recite dependencies from preceding claims. New claims 144-147 therefore find support in originally filed claims 1, 34, 49 and 107 as well as in previously pending claims 63 and 71.

Claims 63, 136 and 137 are amended. Support for these amendments can be found at least in the specification on page 4 lines 1-8, page 6 lines 6-9 and 19-21, page 19 lines 9-12, and page 20 lines 16-20.

New claims 141-147 are added. Support for new claims 141-143 can be found throughout the specification and in the claims as originally filed and/or as previously pending. Support for new claims 144-147 is recited above.

As a result, claims 63, 69-71, 134-139 and 141-147 are pending for examination. No new matter has been added.

It is expected that the Examiner will consider the subject matter of claims 144-147 as withdrawn based on the prior restriction and election of claims. Claims 63, 69-71, 134-139 and 141-143 are related to claims 144-147 (just as they related to claims 1, 34, 49 and 107) as product and process of use claims. Accordingly, Applicant requests rejoinder of claims 144-147 once claims 63, 69-71, 134-139 and 141-143 are deemed allowable. Such rejoinder is appropriate because of the product and process of use relationship between these claims and because process claims 144-147 depend from product claims 63, 71 and 141-143.

***Allowable Subject Matter***

Applicant acknowledges the Examiner's conclusion that claims 71 and 139 are allowed.

***Claim Objections***

Applicant further acknowledges the Examiner's conclusion that claims 134 and 135 would be allowable if rewritten in independent form. Applicant has not rewritten these claims in this manner, and instead has amended claim 63 to address the remaining rejections. Applicant however reserves the right to rewrite these claims in independent form in a subsequent amendment should that be necessary.

***Withdrawn Rejections***

Applicant acknowledges the Examiner's withdrawal of the rejections of claims 63, 69-71 and 134-139 under 35 U.S.C. § 112, first (written description) and second paragraphs.

***Rejection under 35 U.S.C. §112, second paragraph***

Claims 63, 69, 70 and 136-138 are rejected under 35 U.S.C. §112 as being indefinite in view of the recitation of "region corresponding to". Applicant has deleted this phrase from claim 63 and further amended the claim to clarify its meaning. The claim and its dependent claims 69, 70 and 136-138 are now definite. Reconsideration and withdrawal of this rejection is respectfully requested.

***Rejection under 35 U.S.C. §112, first paragraph***

Claims 63, 69, 70 and 136-138 are rejected under 35 U.S.C. §112, first paragraph, enablement.

Applicant acknowledges the Examiner's conclusion that the specification enables isolated nucleic acid molecules comprising SEQ ID NO:1 or full complements thereof (as now recited in new claims 142 and 143). The Examiner however considers that the full scope of the rejected claims is not enabled due to the recitation of "region corresponding to nucleotides 23-29 of SEQ ID NO:2" and "region corresponding to between and including nucleotides 24-28 of SEQ ID NO:2". Applicant traverses in part. As noted above, claim 63 has been amended to delete the recitation of "region corresponding to" in order to clarify the meaning of the claim.

Claim 63 now recites in part a nucleic acid molecule that (1) hybridizes, under stringent conditions, to a nucleic acid molecule having a sequence of SEQ ID NO:2 (wild type sequence)

and thereby spans nucleotides 23 and 29 of SEQ ID NO:2, and (2) has an addition, deletion or substitution in at least two nucleotides in the TATTT sequence when compared to SEQ ID NO:2. Claims 136 and 137 have been amended in a similar manner. Those of ordinary skill in the art will be able to identify nucleic acids that hybridize under stringent conditions to SEQ ID NO:2 and that when hybridized to SEQ ID NO:2 span nucleotides 23 and 29 of SEQ ID NO:2. Those of ordinary skill in the art will also be able to identify which of these nucleic acids have a mutation (i.e., an addition, deletion or substitution) in at least two nucleotides in the TATTT sequence. This can be done by simple comparison with SEQ ID NO:2 which has only one TATTT sequence. Claim 63 further requires that the nucleic acid be at least 48 nucleotides in length and that it enhance PNAG production when linked to an *ica* nucleic acid as compared to SEQ ID NO:2. These structural and functional limitations all serve to define the claimed nucleic acids sufficiently such that one of ordinary skill in the art can make such nucleic acids in view of the teachings of the specification and the knowledge in the art.

New claim 141 recites nucleic acids that vary from SEQ ID NO:2 by having a mutation of at least two nucleotides between and including nucleotides 24 and 28 of SEQ ID NO:2. Again, such nucleic acids can be identified by simple comparison with SEQ ID NO:2. Like claim 63, this claim further requires that the nucleic acid be at least 48 nucleotides in length and that it enhance PNAG production when linked to an *ica* nucleic acid as compared to SEQ ID NO:2. Those of ordinary skill in the art will also be able to make nucleic acids having these features based on the teachings of the specification and the knowledge in the art.

As stated in a previous amendment, the specification provides species of the claimed nucleic acids including SEQ ID NO:1 (55 nucleotide sequence lacking the 5 nucleotide motif TATTT), SEQ ID NO:16 (193 nucleotide sequence lacking the 5 nucleotide motif TATTT), SEQ ID NO:18 (48 nucleotide sequence lacking the 5 nucleotide motif TATTT), SUB sequences (sequences that substitute the 5 nucleotide motif TATTT with ATAAA including but not limited to those that are 53 nucleotides in length), and sequences that substitute the 5 nucleotide motif TATTT with ACGTA, TATCG, TGCTG, AAACC, CGATC, GCTAT, TATGG, TATAA, AAAAA, TTTTT, CCCCC or GGGGG, among others. Thus, not only does the specification teach the and mutant and wildtype sequences of SEQ ID NO:1 and 2 and the significance of the

TATTT 5 nucleotide motif within the wildtype sequence, it further provides numerous nucleic acid species embraced by the rejected claims.

Applicant submits that the subject matter of the rejected claims can be practiced without undue experimentation. The rejected claims are therefore enabled. Reconsideration and withdrawal of this rejection is respectfully requested.

### **CONCLUSION**

A Notice of Allowance is respectfully requested. The Examiner is requested to call the undersigned at the telephone number listed below if this communication does not place the case in condition for allowance.

If this response is not considered timely filed and if a request for an extension of time is otherwise absent, Applicant hereby requests any necessary extension of time. If there is a fee occasioned by this response, including an extension fee, the Director is hereby authorized to charge any deficiency or credit any overpayment in the fees filed, asserted to be filed or which should have been filed herewith to our Deposit Account No. 23/2825, under Docket No. B0801.70256US01.

Respectfully submitted,



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